WHAT IS CLAIMED IS:

1. A DNA construct that encodes, upon expression in a plant cell, a fusion protein comprising a multimeric cholera toxin B subunit and a first immunogenic antigen from a causal factor of a first mammalian disease.

2. The DNA construct of claim 1, where the first immunogenic antigen is a rotavirus antigen.

3. The DNA construct of claim 1, where the first immunogenic antigen is an enterotoxigenic *E. coli* antigen.

4. The DNA construct of claim 1, where the fusion protein encoded by the DNA construct further comprises a second cholera toxin subunit.

5. The DNA construct of claim 4, where the second cholera toxin subunit is cholera toxin A2 subunit.

6. The DNA construct of claim 1, where the fusion protein encoded by the DNA construct further comprises a second immunogenic antigen from a causal factor of a second mammalian disease.

7. The DNA construct of claim 6, where the second immunogenic antigen is a rotavirus antigen.

8. The DNA construct of claim 6, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

9. The DNA construct of claim 1, where the first mammalian disease is an infectious enteric disease.

10. A DNA construct that encodes, upon expression in a plant cell, a fusion protein comprising a cholera toxin A2 subunit, a multimeric cholera toxin B subunit, a first immunogenic antigen from a causal factor of a first mammalian disease, and a second immunogenic antigen from a causal factor of a second mammalian disease.

11. The DNA construct of claim 10, where the first immunogenic antigen is a rotavirus antigen.

12. The DNA construct of claim 10, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

13. The DNA construct of claim 10, where the first mammalian disease or the second mammalian disease or both the first mammalian disease and the second mammalian disease is an infectious enteric disease.

14. An expression vector comprising the DNA construct of claim 1.

15. An expression vector comprising the DNA construct of claim 10.

16. A transgenic plant cell transformed with the DNA construct of claim 1.

17. A transgenic plant cell transformed with the DNA construct of claim 10.

18. A transgenic plant seed transformed with the DNA construct of claim 1.

19. A transgenic plant seed transformed with the DNA construct of claim 10.

20. A transgenic plant transformed with the DNA construct of claim 1.

21. A transgenic plant transformed with the DNA construct of claim 10.

22. A method of producing an immunogen in a plant comprising cultivating the transgenic plant of claim 20 under conditions effective to express the fusion protein.

23. A method of producing an immunogen in a plant comprising cultivating the transgenic plant of claim 21 under conditions effective to express the fusion protein.

24. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the plant of claim 20.

25. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the plant of claim 21.

26. Means for producing, in a plant cell, a fusion protein comprising a multimeric cholera toxin B subunit and a first immunogenic antigen from a causal factor of a mammalian disease.

27. The means for producing of claim 26, where the means comprises a DNA

construct that encodes, upon expression in the plant cell, a multimeric cholera toxin B subunit and a first immunogenic antigen from a causal factor of a first mammalian disease.

28. The means for producing of claim 26, where the first immunogenic antigen is a rotavirus antigen.

29. The means for producing of claim 26, where the first immunogenic antigen is an enterotoxigenic *E. coli* antigen.

30. The means for producing of claim 26, where the fusion protein comprises a second cholera toxin subunit.

31. The means for producing of claim 30, where the second cholera toxin subunit is cholera toxin A2 subunit.

32. The means for producing of claim 26, where the fusion protein further comprises a second immunogenic antigen from a causal factor of a second mammalian disease.

33. The means for producing of claim 32, where the second immunogenic antigen is a rotavirus antigen.

34. The means for producing of claim 32, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

35. Means for producing, in a plant cell, a fusion protein comprising a cholera toxin A2 subunit, a multimeric cholera toxin B subunit, a first immunogenic antigen from a causal factor of a first mammalian disease, and a second immunogenic antigen from a causal factor of a second mammalian disease.

36. The means for producing of claim 35, where the first immunogenic antigen is a rotavirus antigen.

37. The means for producing of claim 35, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

38. An expression vector comprising the means of claim 26.

39. An expression vector comprising the means of claim 35.

40. A transgenic plant cell transformed with means construct of claim 26.

41. A transgenic plant cell transformed with the means of claim 35.

42. A transgenic plant seed transformed with the means of claim 26.

43. A transgenic plant seed transformed with the means of claim 35.

44. A transgenic plant transformed with the means of claim 26.

45. A transgenic plant transformed with the means of claim 35.

46. A method of producing an immunogen in a plant comprising cultivating the transgenic plant of claim 42 under conditions effective to express the fusion protein.

47. A method of producing an immunogen in a plant comprising cultivating the transgenic plant of claim 43 under conditions effective to express the fusion protein.

48. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the plant of claim 42.

49. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the plant of claim 43.

50. A fusion protein comprising a multimeric cholera toxin B subunit and a first immunogenic antigen from a causal factor of a first mammalian disease.

Sub. a1

51. The fusion protein of claim 50, where the first immunogenic antigen is a rotavirus antigen.

52. The fusion protein of claim 50, where the first immunogenic antigen is an enterotoxigenic *E. coli* antigen.

53. The fusion protein of claim 50, can further comprise a second cholera toxin subunit.

54. The fusion protein of claim 53, where the second cholera toxin subunit is cholera toxin A2 subunit.

55. The fusion protein of claim 50, can further comprise a second immunogenic antigen from a causal factor of a second mammalian disease.

56. The fusion protein of claim 55, where the second immunogenic antigen is a rotavirus antigen.

57. The fusion protein of claim 55, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

58. The fusion protein of claim 50, where the first mammalian disease is an infectious enteric disease.

Sub. a1

59. The fusion protein of claim 50, comprising a cholera toxin A2 subunit, a multimeric cholera toxin B subunit, a first immunogenic antigen from a causal factor of a mammalian disease, and a second immunogenic antigen from a causal factor of a second mammalian disease.

60. The fusion protein of claim 59, where the first immunogenic antigen is a rotavirus antigen.

61. The fusion protein of claim 59, where the second immunogenic antigen is an enterotoxigenic *E. coli* antigen.

62. The fusion protein of claim 59, where the first mammalian disease or the second mammalian disease or both the first mammalian disease and the second mammalian disease is an infectious enteric disease.

63. A fusion protein encoded by the DNA construct of claim 1.

64. A fusion protein encoded by the DNA construct of claim 10.

65. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the fusion protein of claim 50.

66. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the fusion protein of claim 59.

67. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the

fusion protein of claim 63.

68. A method of inducing partial or complete immunity to an infectious disease in a mammal comprising providing to the mammal for oral consumption an effective amount of the fusion protein of claim 64.

add a2